

When the Best Design Isn't Good Enough: Changing Organizations from the Inside Out

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LM: I'm actually involved in a couple of startups, and they've made me the CXO—chief experience officer. Elevating user design to a point even higher than marketing has to do with positioning the company so they can do the right things.

After the requirements is too late. We should begin with initial user research—what are the real problems they need to solve in terms of the business area?

CZ: One area where I've seen user experience practice make a critical difference is mobile applications. The deployments that work are the ones where user experience people went out in the field and watched the field service representatives struggle out of the truck with their tools in one hand, their paperwork in another, and their PDA in the third hand.

UX: What about other "good to great" points?

LM: Again, because user-centered design is a repeatable, successful process. It helps the business become more data-oriented than ego-oriented. The communication necessary between organizations and levels makes for a

better company. If they're trying to share vision and get the right people on the bus, then they have a problem when their objectives are not written down. The Level 5 executive will help get this material posted, while an ego-ridden Level 4 executive won't necessarily encourage it.

The user experience process, because it's based on research, supports the hedgehog concept. "Wannabe" companies typically just keep adding things to their products, until you have a whole computer in your hand. But you can't do much with it, it's too hard.

CZ: A few years ago, lots of companies got into WAP (wireless application protocol) and didn't ask why anybody would want to do some of these tasks on those tiny little phone screens. I remember one application where you could order a book right now, on your WAP phone, and then wait three to five days to have it delivered.

If you're going to wait that long, why can't you wait until you get home to order it?

LM: The difference between possibility and probability **UX**

ABOUT MR. MARINE & MR. ZETIE



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THE VIEW FROM HERE

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project, with the person leading a particular effort, such as the development lead, to get a better idea about the processes in use. I might also start brainstorming about how we might best work together, especially if I am talking with a software developer who might not be used to having someone else involved in the user interface design. Informal meetings at the start of a software development effort can be a great way to break the ice. It shows that you are interested enough in your fellow project members to ask about what they do and how they do it before imposing any of your processes on top of theirs.

- ☉ Pick my battles carefully. We are user advocates. There are certain issues for which we must stand our ground and others for which we can concede it. Being aware of the timelines, the software development scope,

business and customer needs, and what everyone else is doing through meetings and informal discussions will help you know when to push and when to concede.

- ☉ Wear different hats. To keep things on track, we may all need to wear different hats at different times, even if we feel the work is out of our scope or somehow beneath us. Being willing to roll up your sleeves and help in other areas can go a long way in letting others know you are a true team player.

I am not saying that we usability practitioners should abandon our mission. After all, usability is a noble cause that should be cham-

pioned, but so is developing good code; so is effectively managing a project to try and keep everyone somewhat sane and on schedule; so is performing quality-assurance checks to ensure that nothing goes out the door broken; so is developing accurate business requirements and specifications that others can follow; so is writing well-organized and understandable content and documentation; and so are all the other tasks it takes to deliver a good product. Usability is a part of, not the whole reason for, a successful project, and while we may realize that, we need to be sure that the other people we work with know that we do, too. **UX**

—By Kristina K. Davis

ABOUT KRISTINA DAVIS



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Staying Alive: Paying Attention to Human Factors

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Second, include users in the design process early on. Have them test your early prototypes and designs, then iterate based on their feedback.

Third, have people with this kind of training on the design teams. Human factors is not something that just anyone can do; it needs special training and education. You can't boil it down to a checklist any more than you'd use a checklist to have just anyone do open heart surgery.

UX: With open heart surgery, there is a clear, known educational path to get that expertise. Yet in human factors, or usability, right now anyone can claim to be an expert. Is that part of the difficulty in gaining acceptance?

KV: Partly, maybe, but the set of applications is so broad. There are different disciplines that all have different things to contribute: engineering, psychology, computer science, kinesiology. The ideal skills for each application are so different.

UX: So it takes a different kind of expert depending on the application being looked at. Is there a difference between "usability" and "human factors"? If so, what is the difference?

KV: Usability tends to be associated mainly with computer systems, or at least that's the general connotation that it has. Human factors engineering is broader. It also includes things like the bio-mechanics on running shoes for Nike, or looking at management and organizational issues—designing the technical systems and corporate structure that will produce the desired results.

UX: What can people do to win greater support for human-factors-based design in their companies?

KV: (laughing) Give my book to their bosses! I think the most important thing is to make the business case financially; to demonstrate that it is not more expensive. In fact, it will probably save you money if you look at the whole life cycle of the design. There's also resistance because people are reluctant to change the way they do things. That takes time.

UX: You talk in your book about the significant

strides that were made in improving the human factors in the design of aviation systems. Do you think real change is now starting to happen in medical systems? Or is there still a major battle to be fought to change attitudes about the reporting and handling of medical errors?

KV: There have been substantial changes in the medical field. This was helped by a 1998 report issued in the United States on medical errors and another in Canada this past spring. Awareness has increased, and a lot of hospitals are looking at this. There are now conferences on patient safety. However, it is just the beginning and there's still a long way to go. Fear of lawsuits has made medical professionals reluctant to report errors, but there is legislation being proposed in the United States to have non-punitive handling of reports of medical errors.

UX: What are the most important things that engineering, computer programming, and design schools should be teaching about human-centered design?

KV: The fact that it exists! That the design is for a person or an organization or a society; the

technology is a means, not an end, in itself. That shift in perspective is a really big shift, but as soon as you look at it that way, a lot of things become really obvious.

Technology is the answer, not the question.

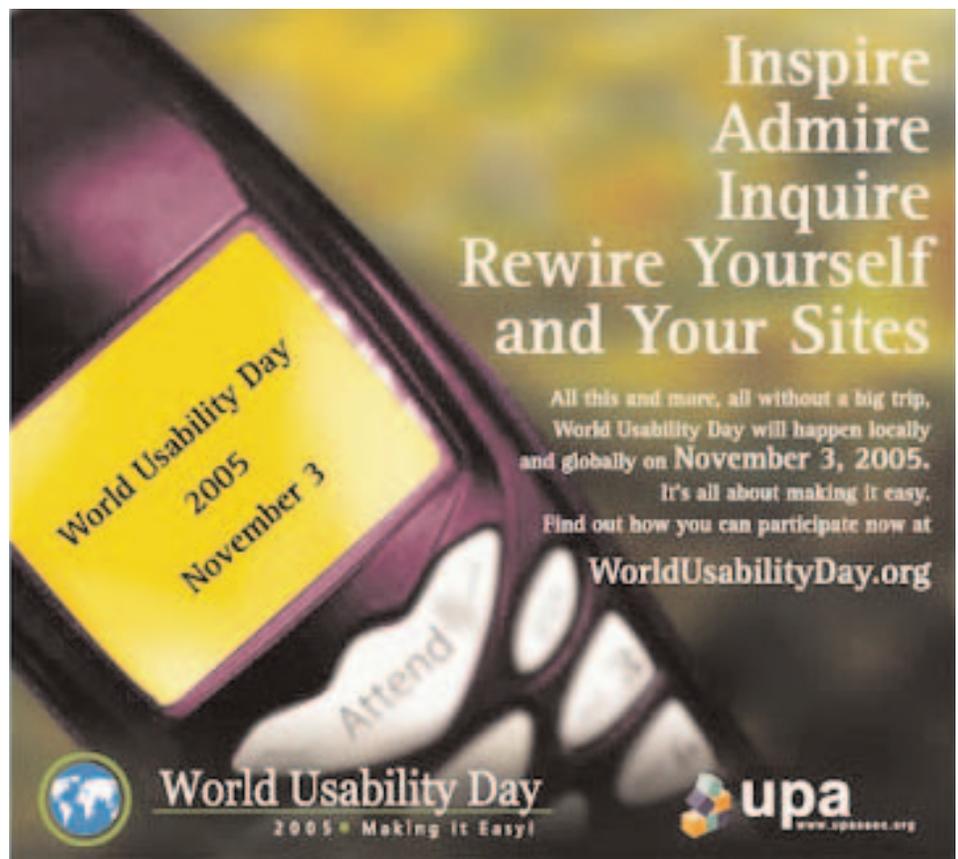
UX: Any final comments?

KV: It is important for usability people to spread the word; to tell other people who don't know anything about this stuff. If enough people knew about it and believed it, we could reach a critical mass. **UX**

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ABOUT TEMA FRANK

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Cautionary Advice from a Usability Zealot

Yes, usability is important! However, in trying to convince others in your organization of that fact, don't neglect to show them that you know what they do is important as well. Otherwise, you may be sending the wrong message.

When I started my first job as a usability specialist, I was a woman on a mission. I was out to champion usability within an information technology company of 5,000-plus employees, ready to rescue users from the drudgery and headache of working with poorly designed user interfaces. I was the only one in the company whose sole job was usability. I was ready to pioneer new ground and proselytize the virtues (and the cost savings benefits) of usability.

However, in my devotion, I lost a few possible converts along the way. It wasn't until I was faced with managing a redesign of a large, web-based application that I realized what I might have done to lose them.

Since this would be my first major endeavor wearing a project manager's hat, I wanted to be as prepared as possible. Placing the hat firmly on my head, I delved into books, joined in online discussions, and talked with friends who had taken on similar endeavors. I wanted the project to be a success.

When I first started thinking about the redesign, of course I started from a usability point of view, thinking in terms of user and task analysis, developing low- and high-fidelity prototypes, usability testing, etc. But, as I gathered information for a project strategy to present to leadership, and as I looked at the redesign as a project manager instead of as a usability specialist, I realized why I had lost those people: I didn't fully acknowledge or appreciate all the other tasks needed to ensure project success. I was so wrapped up in promoting usability that I inadvertently gave some people the impression that I thought their roles and tasks were not as important as mine.

Usability is still a relatively new field, and it should be championed and promoted, but I think as practitioners, like followers of a new faith, we are sometimes so steadfast in our

resolve to convert others to our way of thinking that we don't see the proverbial forest for the trees. For those of us working with software development teams who have had little experience working with usability practitioners or with incorporating usability methodologies into the development lifecycle, we need to be mindful of certain things. For instance, if I could go back now to when I started as a usability specialist, I would be sure to do the following:

- ⊙ Lay down my sword and listen. After all, that is what we are trained to do as usability practitioners, right? To listen. And not just to listen to our users, but also to those with whom we will be working. They are a target audience as well, and will be the recipients of the information we gather. We need to listen to know how best to present the information so that it will be best used by those who receive it.

Safeguarding Oneself against Retrograde Amnesia

Because we do not all work in ideal environments, be careful to document discussions you have with members of the various teams, including the dates on which these discussions take place. Include information on any consensus you reached on how you might best work together. This can help if a team member starts backpedaling on what you two discussed, or seems to have trouble remembering what you both agreed upon.

Also, sending a thank you note for the meeting via e-mail may be appropriate. The note allows you to include a brief summary of what you had discussed, thereby leaving a paper trail that can be used in the event of any suspicious amnesia. It also lets the other person know that you are keeping tabs on the conversations that take place between the two of you.

- ⊙ Seek buy-in early and from the top. I would be sure to talk to the person managing the software development effort, especially if he or she has not worked with me or another usability specialist before. I would describe what I do, the benefits of gathering information from users, and the basic processes I use to gather that information. I would be sure to ask how what I do would fit best into the other tasks that need to be completed for the project, and see if he or she has any concerns such as how timelines could be impacted. I would see if there was other information I could provide, such as an estimated cost-benefit analysis.
 - ⊙ Show empathy for the manager's time pressures. I would respect the fact that the person managing the development effort has a lot to do. It might not be possible with the resources available—and the timelines handed down by leadership or the client—to do several rounds of usability testing or to do as thorough a user and task analysis as I, or even the manager, would like. However, if you are able to both convince the person leading the effort of the importance of usability and also show that you are willing to work within the boundaries imposed by timelines and resources, you stand a better chance of having someone who will champion you if you run into resistance or problems with team members, with managers, or even with clients down the road.
 - ⊙ Meet with the development team. I would ask the person leading the development effort if I could have some time in a development meeting to talk to the team as a whole to explain what I do and solicit feedback from them. If every role represented on a software development project would do this, everyone would have a clear understanding of what everyone else was responsible for. I think we assume that, just because someone is in a well-established role, everyone automatically knows what that person will be doing on a particular project.
 - ⊙ Meet informally with each team member. I would make sure that I have a clear understanding of what each person is responsible for, whether or not responsibilities are discussed in a meeting. I would arrange an informal meeting with each person on the team, or if it is a large team
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